



好天线 · 优比造

东莞市优比电子有限公司

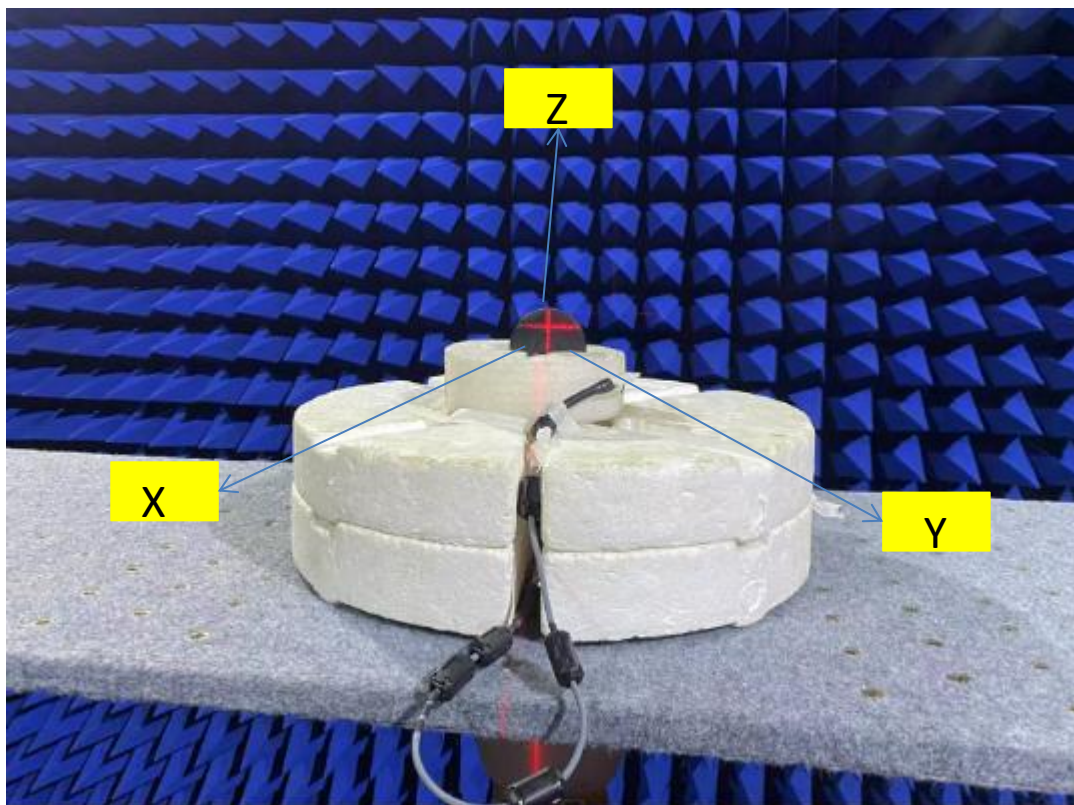
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## Antenna Study

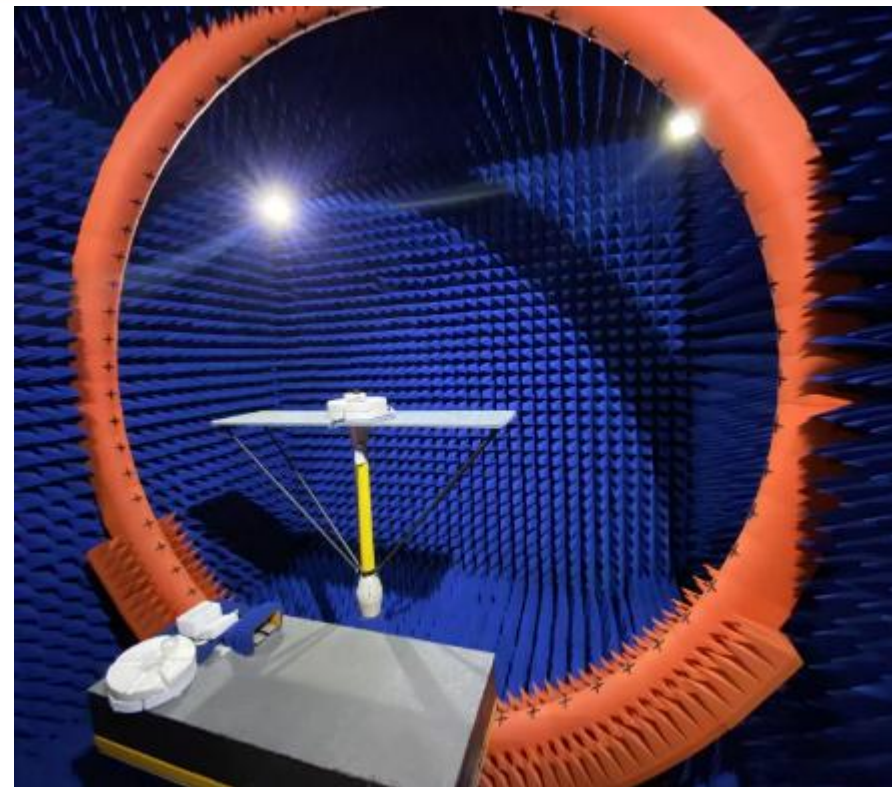
- **Client Name:**
- **Project Name: S309-TX**
- **Debugging frequency band:  
5.8G**
- **Valuation date: 2025.07.09**

# Internal Antenna

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Testing environment



Testing 3D microwave darkroom(6m\*6m\*6m)

# External Antenna

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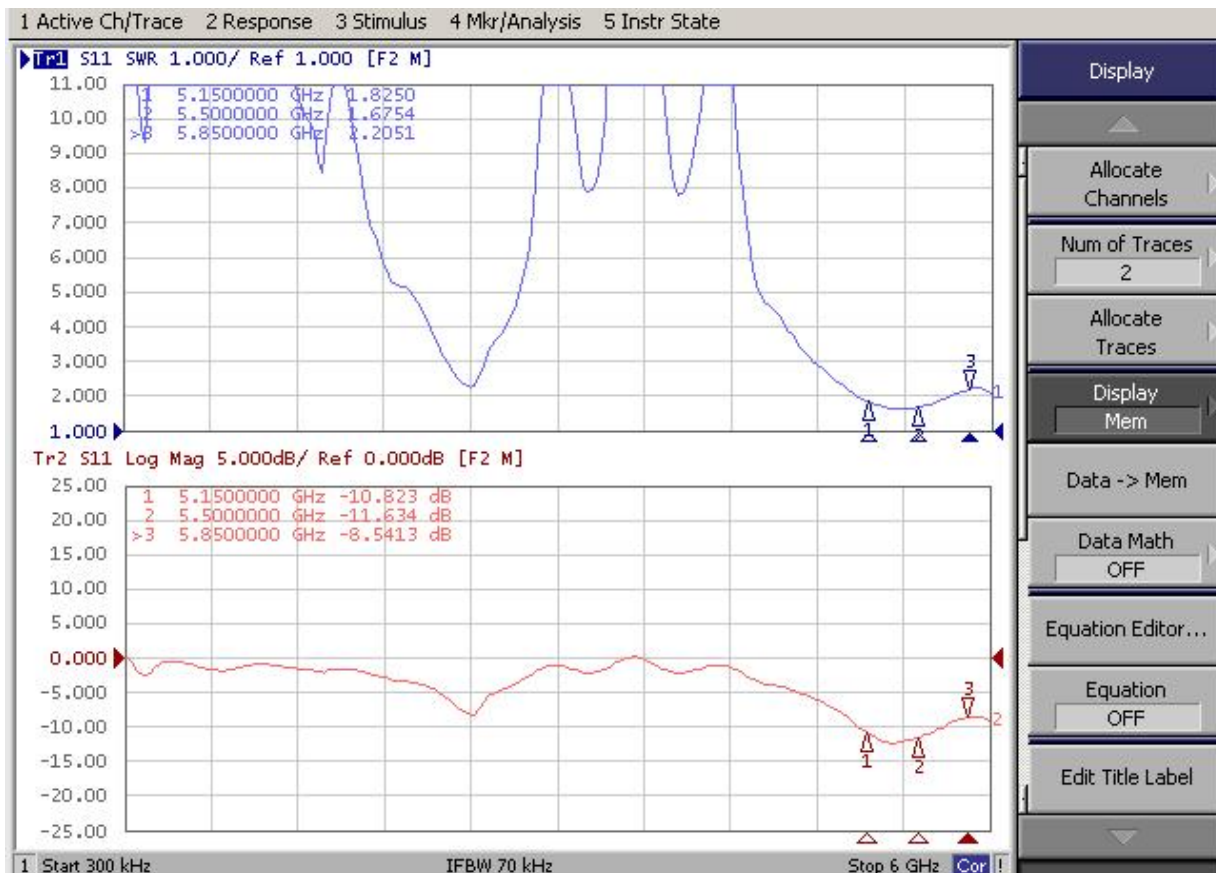
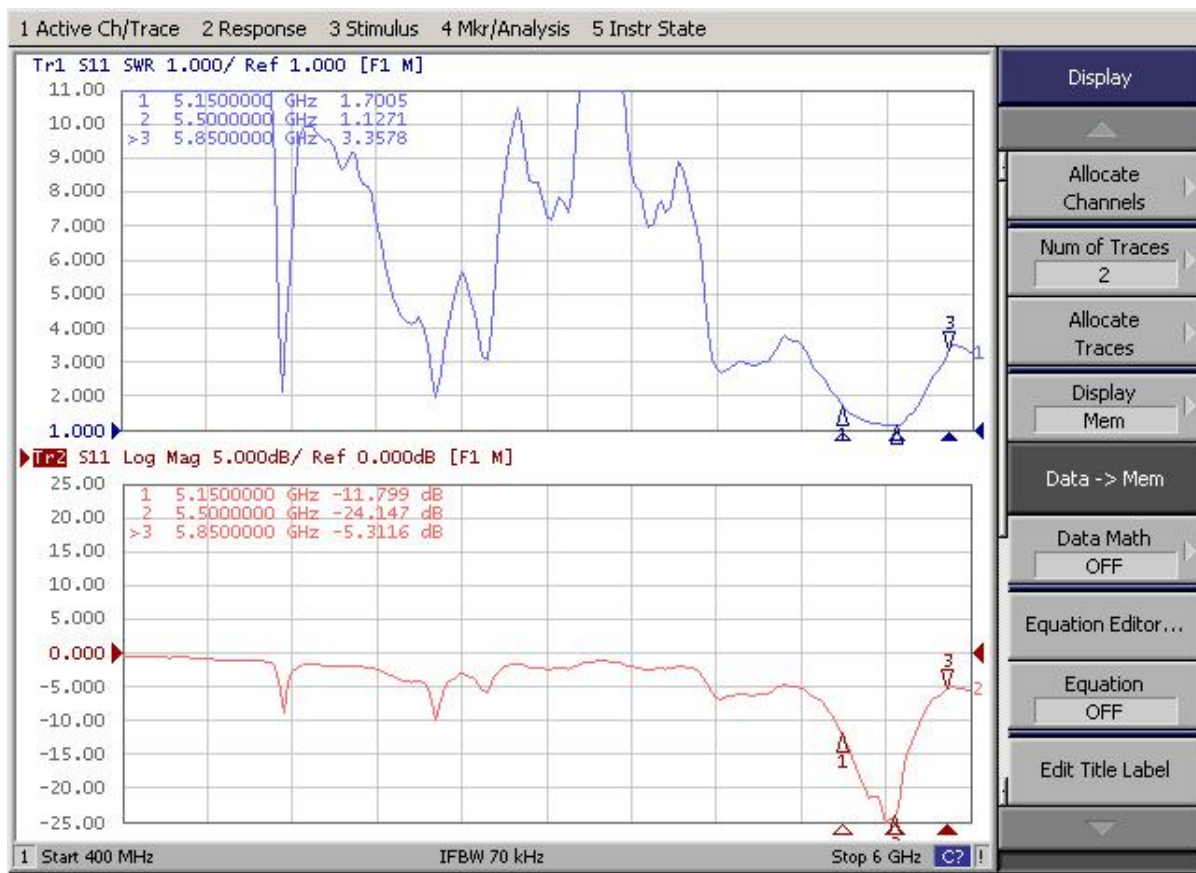
- Antenna name: 5.8G
- Antenna Type: PIFA
- Covers: 5150/5850MHz

# S Parameter\_Return Loss&VSWR

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带磁铁

不带磁铁

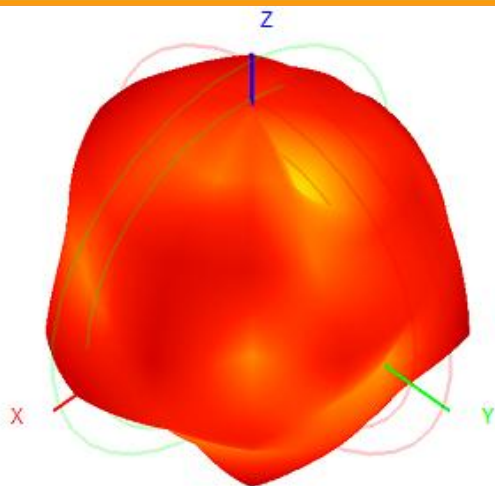


# Efficiency and Gain

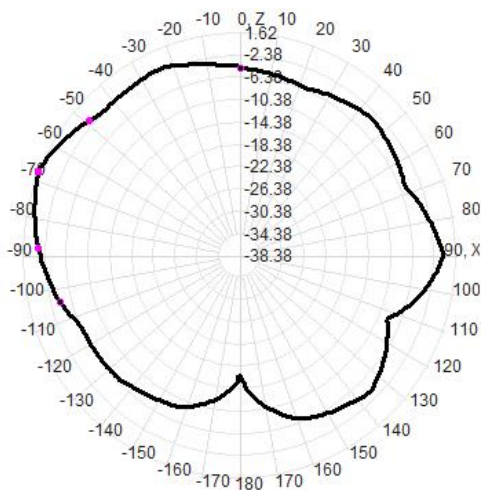
| Frequency ID    | 1      | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      | 10     | 11     | 12     | 13     | 14     | 15     |
|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Frequency (MHz) | 5150.0 | 5200.0 | 5250.0 | 5300.0 | 5350.0 | 5400.0 | 5450.0 | 5500.0 | 5550.0 | 5600.0 | 5650.0 | 5700.0 | 5750.0 | 5800.0 | 5850.0 |
| Gain (dBi)      | 2.22   | 1.79   | 2.23   | 2.64   | 2.56   | 2.30   | 2.37   | 3.32   | 3.22   | 3.46   | 3.63   | 3.53   | 3.88   | 4.23   | 3.50   |
| Efficiency (%)  | 52.49  | 47.66  | 50.53  | 58.18  | 53.22  | 48.11  | 49.11  | 53.57  | 51.96  | 53.43  | 54.03  | 49.52  | 50.29  | 54.21  | 47.25  |

# 2D/3D方向图-5500MHz-带磁铁

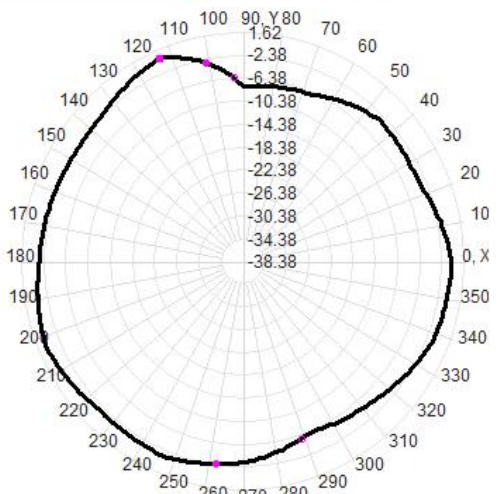
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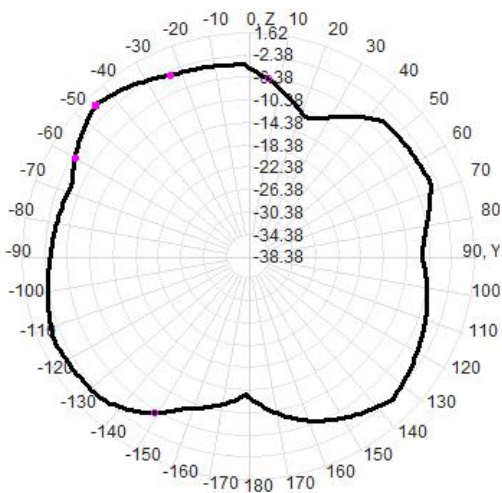
远场方向图



E1-XZ



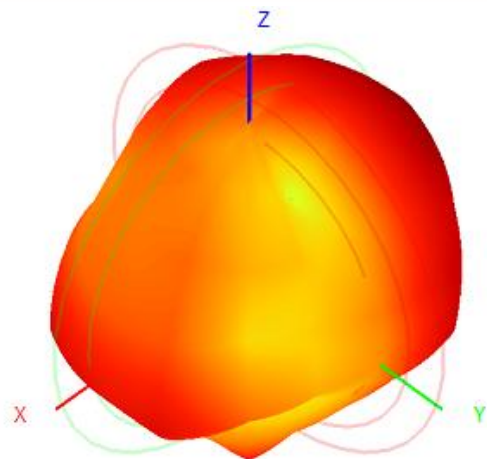
H-XY



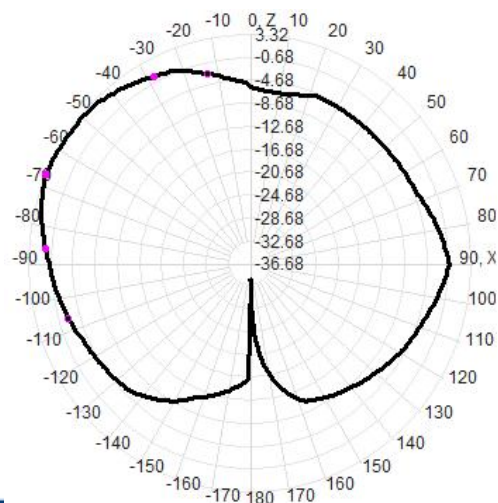
E2-YZ

# 2D/3D方向图-5500MHz-不带磁铁

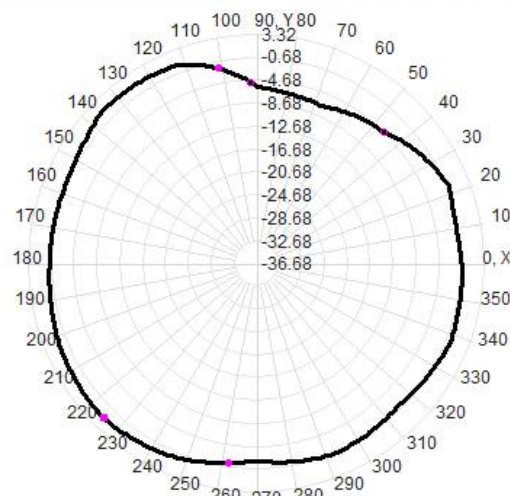
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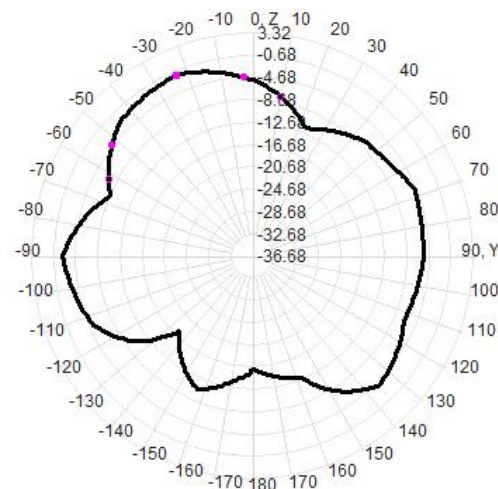
远场方向图



E1-XZ



H-XY



E2-YZ

# Conclusion

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- Antenna covers 5.8G
- Test shows excellent performance, VSWR match < 3.3in working band.

## 11. Mechanical Specification

